

State of California  
Department of Water Resources  
State Water Resources Control Board  
Department of Health Services

2002 RECYCLED WATER TASK FORCE  
MINUTES OF  
12 SEPTEMBER 2002 MEETING

**Meeting Time and Location**

10:00 am-2:00 pm, 12 September 2002, Cal/EPA Building, 2nd Floor, Sierra Hearing Room,  
1001 I Street, Sacramento, California.

**Attendance**

Task Force Members:

Takashi Asano	Earle Hartling*	Mansour M. Nasser
Kirk Bone	Keith Israel*	David P. Spath
Jerry D. Brown	Richard Katz	Frances Spivy-Weber
Dan Carlson*	Denise L. Kruger	William Steele
Bob Castle	Gary R. Lynch	William T. VanWagoner
Ane D. Deister	Rick Martin	Muriel Watson
Karen Furst	Jonas Minton	Marguerite Young
*Via telephone		

Task Force Substitutes:

Richard Carlson for Gary Erbeck  
Martha Davis for Rich Atwater  
Tom Gohring for Patrick Wright  
Cliff Moriyama for Rex Hime  
John T. Morris for Phillip J. Pace  
Wendy Ridderbusch for Steve Hall  
Mark Tettermer for Darryl G. Miller

Task Force Members Absent:

Herman C. Collins	Tom Morrison	Bob Whitley
William R. Everest	Tim Ramirez	David R. Williams
Kathy Fletcher	Steve Shaffer	John B. Withers
Keith Lewinger	R. K. Spackman	

Facilitator:

H. Eric Schockman

State Staff and Members of Public:

29 Persons (See attachment for complete list)

## **Summary of Proceedings**

### **A. Self-Introduction and Welcome Remarks**

David Spath opened the meeting as acting Chair until Richard Katz, Chair of the 2002 Recycled Water Task Force, arrived. Spath emphasized the importance of sustained participation in the Task Force until its conclusion to ensure a quality report.

There was brief discussion of when the Task Force would have opportunity to thoroughly discuss the recommendations and of the goal of achieving consensus. The meetings of 19 November 2002 and 10 January 2003 are to be devoted to discussion of recommendations. Katz emphasized the goal of consensus as the best means of implementing the recommendations. An alternative strategy in case consensus cannot be achieved is not being proposed in order to encourage the Task Force to sincerely work toward consensus. With the importance of water supply needs in the state, Katz felt that the Task Force recommendations would be well received by the Legislature.

### **B. Approval of Meeting Minutes**

Drafts of the minutes of the 3 June 2002 meeting of the 2002 Recycled Water Task Force, dated 11 July 2002, and the 12 July 2002 meeting, dated 9 September 2002, were distributed for review. These were approved with the understanding that copies of the slide presentations would be appended.

### **C. Summary of Activities Since 12 July 2002, Workgroup Progress Reports and White Paper Summaries**

Fawzi Karajeh provided a summary of Task Force activities. There were 11 meetings of workgroups in June, July and August. There will be nine meetings during September and October. A public discussion session is scheduled for 10 October 2002 in conjunction with the California Water Policy ("Power") Conference in Los Angeles. The next meetings of the full Task Force are scheduled for 19 November 2002, 10 January 2003, and 26 February. His slides are attached.

Progress reports were provided on the Funding/CALFED Coordination, Regulations and Permitting, and Economics Workgroups. In addition, Ane Deister presented a particularly substantive progress report in the form of a slide presentation, attached, for the Public Education and Outreach Workgroup. One of the outstanding themes being developed by the workgroup is community choice in selecting when and where to use recycled water using a meaningful public participation process in decision-making. The water supply needs and choices need to be provided to the public to allow an informed community-based decision.

Spath presented the Science and Health/Indirect Potable Reuse Workgroup draft white paper. This workgroup was responsible for analyzing the need to reconvene the California Potable Reuse Committee, which was created in 1993 and produced a report in 1996. The workgroup

has concluded that the findings in this report are still relevant and that there is no need to reconvene the committee at the present time. However, there are nontechnical issues related to indirect potable reuse and perhaps there is a need for a public advisory panel to address these nontechnical and public perception issues. Two issues that are being addressed by the workgroup, discharge from impoundments containing recycled water and the effects of water softeners, will be added in future drafts of the white paper. Spath noted that a proposal for state funding of research activities at the University of California, Davis, has been brought before the workgroup for review. The WaterReuse Foundation has responded to the workgroup that the funds would be better used as part of the WaterReuse Foundation research program. The workgroup discussed this proposal at length and there was no consensus. He noted that such a review of a specific proposal was not part of the charge of the legislation for the Task Force.

Bob Hultquist presented the Plumbing Code/Cross Connection Control Workgroup draft white paper. He noted some issues that have yet to be incorporated into the draft as well as the appendices.

#### **D. Funding/CALFED Expert Presentations**

Tom Gohring, Maria Mariscal, and Diana Robles presented aspects of the draft Funding/CALFED Coordination Workgroup white paper and funding issues background. Their associated slide presentations on CALFED overview, local funding, and state/federal funding, respectively, are attached. There was discussion of making connections in the water supply to realize that using recycled water in one region may benefit another region if the displaced fresh water can be transferred between regions. It was also pointed out that indirect reuse is frequently occurring with inland wastewater discharges, so direct reuse may not result in any net water savings.

#### **E. Regulation and Permitting Expert Presentations**

Rich Mills and Jeff Stone presented slides, attached, to provide an overview of the regulatory framework of water recycling in California and the roles of various state agencies. An expert presentation by Bob Castle on the need for uniform statewide recycled water standards was postponed due to lack of time until the next Task Force meeting. Jerry Brown gave a brief description of the issue of incidental runoff from ponds holding recycled water on golf courses during storms. Norris Brandt presented slides, attached, on the issue of water softeners and their impact on recycled water quality.

#### **F. Economics Expert Presentations**

Wendy Illingworth described economic and financial evaluations of recycled water projects. Her slides are attached.

**G. Public Comment**

Ed Crouse of Rancho Murieta Community Services District described the many regulatory requirements imposed on a project using recycled water and the disincentive that results from the costs of these requirements.

**H. Future Meeting**

The next meeting will be held 19 November 2002.

2002 RECYCLED WATER TASK FORCE  
ATTENDEES AT 12 SEPTEMBER 2002 MEETING

Stephen J. Adams	Northern California Court Reporters (court reporter for meeting)
Alan Arroyo	Department of Water Resources
Takashi Asano	University of California at Davis
Fethi BenJemaa	Department of Water Resources
Kirk Bone	Serrano Associates LLC
Kevin Booker	Sonoma County Water Agency
Norris Brandt	Irvine Ranch Water District
Jerry D. Brown	Contra Costa Water District
Dan Carlson*	City of Santa Rosa Utilities Department
Richard Carlson	San Diego County Department of Environmental Health
Bob Castle	Marin Municipal Water District
Rosario Cortes	WateReuse Association
Ed Crouse	Rancho Murieta Community Services District
Martha Davis	Inland Empire Utilities Agency
Ane D. Deister	El Dorado Irrigation District
Karen Furst	San Joaquin County
Kathryn Gies	West Yost & Associates
Tom Gohring	CALFED Bay-Delta Program
Earle Hartling*	Sanitation Districts of Los Angeles County
Bob Hultquist	Department of Health Services
Wendy Illingworth	Economic Insights
Philip Isorena	State Water Resources Control Board
Keith Israel*	Monterey Regional Water Pollution Control Agency
Fawzi Karajeh	Department of Water Resources
Richard Katz	California State Water Resources Control Board
Bob Kenton	Santa Clara Valley Water District
Luana Kiger	Department of Water Resources
Nancy King	Department of Water Resources
Denise L. Kruger	Southern California Water Company, Customer Service Region II
Nancy Lee	State Water Resources Control Board
Gary R. Lynch	Park Water Company
Maria G. Mariscal	San Diego County Water Authority
Rick Martin	Bureau of Reclamation
Richard Mills	State Water Resources Control Board
Jonas Minton	Department of Water Resources
Joe Morales	
Cliff Moriyama	California Business Properties Association
John T. Morris	Metropolitan Water District of Southern California
Bruce Mowry	Water Replenishment District of Southern California
Cheryl Muñoz	San Francisco Public Utilities Commission
William Murray	Department of Water Resources
Mansour M. Nasser	City of San Jose Municipal Water System
Art O'Brien	City of Roseville
Wendy Ridderbusch	Association of California Water Agencies
Diana Robles	State Water Resources Control Board
Rick Ruiz	PS Enterprises
H. Eric Schockman	University of Southern California
David P. Spath	Department of Health Services
Frances Spivy-Weber	Mono Lake Committee

William Steele  
Jeffrey Stone  
Mark Tettemer  
Kathleen Van Velsor  
William T. VanWagoner  
Al Vargas  
Muriel Watson  
Jennifer West  
Marguerite Young

Bureau of Reclamation  
Department of Health Services  
Central Basin Municipal Water District  
Association of Bay Area Governments  
East Valley Water Recycling Project, Los Angeles Dept of Water and Power  
California Department of Food and Agriculture  
Revolting Grandma's  
Inland Empire Utilities Agency  
California Clean Water Action

\* By telephone

2002 RECYCLED WATER TASK FORCE  
LIST OF HANDOUT MATERIALS FOR 12 SEPTEMBER 2002 MEETING

1. "Meeting Agenda, 2002 Recycled Water Task Force Fourth Meeting, Thursday, 12 September 2002", Draft 091102
2. "2002 Recycled Water Task Force Full Task Force Meeting Dates",  
<http://www.owue.water.ca.gov/recycle/docs/TaskForce%20Meetings%20Schedule.htm>, 9/11/02
3. "2002 Recycled Water Task Force, Public Discussion Meeting in conjunction with The California Water Policy Conference (aka the Power Conference) October 10, 2002", no date
4. "2002 Recycled Water Task Force Minutes of 3 June 2002 Meeting", Draft 7/11/02
5. "2002 Recycled Water Task Force Minutes of 12 July 2002 Meeting", Draft 9/9/02
6. "The Need for Uniform Statewide Recycled Water Standards," PowerPoint slides handout by Bob Castle, 12 September 2002 (Presentation was postponed)
7. "Plumbing Code / Cross Connection Control Workgroup Draft White Paper", September 11, 2002
8. E-mail, Subject: Water Recycling Taskforce; To: mills@cwpswrcb.ca.gov (Rich Mills); From: Steve Bilson [stevebilson@earthlink.net]; Sent: 11 July 2002 3:04 AM
9. "Public Education & Outreach Workgroup Progress Report to the 2002 Recycled Water Task Force 12 September 2002 Meeting"
10. "2002 Recycled Water Task Force Workgroups: Membership, Charges and Issues", Draft 9/03/2002

State of California  
 Department of Water Resources  
 State Water Resources Control Board  
 Department of Health Services

**2002 RECYCLED WATER TASK FORCE  
 FOURTH MEETING**

**Thursday, 12 September 2002, 10:00 A.M. to 2:00 P.M.**

**Cal/EPA Building, 2<sup>nd</sup> Floor, Sierra Hearing Room  
 1001 I Street, Sacramento, CA 95814**

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MEETING AGENDA  
*(Times are approximate)*

**10:00-10:10** *Self-introduction of meeting attendees*

**10:10-10:20** *Approval of June 3 and July 12, 2002 meeting minutes*

**10:20-11:15** *Progress to date:*

♦ ***Progress reports:***

*Task Force general business  
 Funding/CALFED Coordination  
 Regulations & Permitting  
 Economics  
 Public Education and Outreach*

♦ ***Draft white papers:***

*Science & Health/Indirect Potable Reuse  
 Plumbing Code/Cross Connection Control*

**11:15-12:00** *Funding/CALFED Expert Presentations and Discussion*

- ♦ *CALFED and role of water recycling*
- ♦ *Local/State/Federal funding of water recycling*
- ♦ *Identification of benefits of water recycling projects*
- ♦ *Project planning, funding, and implementation*

**12:00-12:30** *Break and Lunch Set-up*

**12:30-1:15** *Regulation and Permitting Expert Presentations and discussion*

- ♦ *Incidental runoff*
- ♦ *Lack of uniform interpretation of State standards*
- ♦ *Permitting procedures*
- ♦ *Water softeners and source protection*
- ♦ *Jurisdictional conflicts*



<b><i>1:15-1:45</i></b>	<b><i>Economics and water recycling presentation and discussion</i></b>
<b><i>1:45-1:55</i></b>	<b><i>Public questions and comments</i></b>
<b><i>1:55-2:00</i></b>	<b><i>Future meeting and strategy</i></b>
<b><i>2:00</i></b>	<b><i>Adjourn</i></b>

## PRESENTATION BY FAWZI KARAJEH

State of California  
Department of Water Resources  
State Water Resources Control Board  
Department of Health Services

## 2002 RECYCLED WATER TASK FORCE

**September 12, 2002**  
**10:00 to 2:00 p.m.**

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## Thanks

- **Chairman Richard Katz**
- **Members of the Task Force and its Workgroups**
- **Facilitator, Dr Eric Schockman**
- **Public members for their input**

**Staff of**

- Department of Water Resources including AV
- State Water Resources Control Board
- Department of Health Services

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## The 2002 Recycled Water Task Force's Work Schedule

[illegible]

**Final Draft White Papers-  
November 19 Meeting**

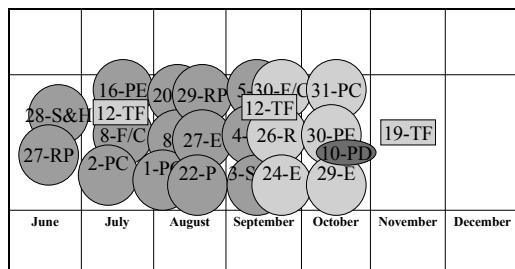
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## 2002 RECYCLED WATER TASK FORCE'S WORKGROUPS

	Workgroup	Chair	Co-chair
1	Science & Health/Indirect Potable Reuse	Takashi Asano	Dave Spath
2	Public Education and Outreach	Jonas Minton	Herman Collins
3	Plumbing Code/Cross Connection	Bob Hultquist	Bob Castle
4	Funding/ CALFED Coordination	Patrick Wright	Diana Robles
5	Regulations/Permitting	Kathy Fletcher	Jerry Brown
6	Economics	John Morris	Nancy Lee

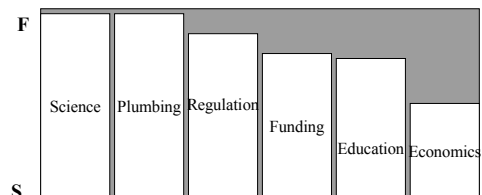
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## Meetings Schedule



5

White paper progress level  
12 Sept 2002



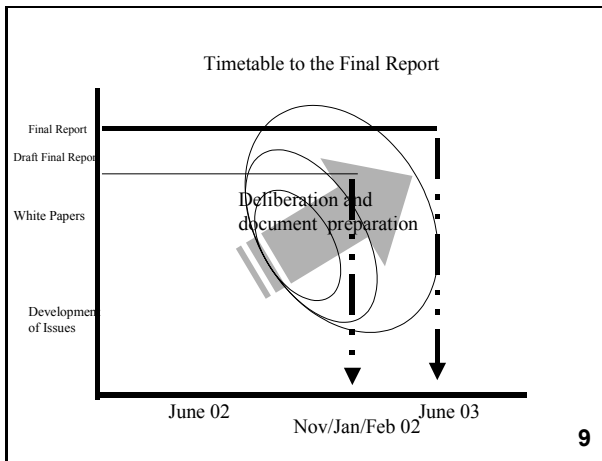
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TF Meetings	June 3	July 12	Sept. 12	Nov. 19
Science & Health				
Plumbing Code/ Cross-connect.				
Public Edu. & Outreach				
Regulations & Permitting				
Funding / CALFED				
Economics				

**Expert Presentation      Progress Report      White Paper      7**

2002 RECYCLED WATER TASK FORCE Meeting Dates			
Meeting	Date	Place	Remarks
I	April 3 (Wednesday), 2002	CAL/EPA Building, Sacramento	Completed- The minute proceedings is being finalized
	May 8 (Wednesday), 2002	Monterey Conference Center, Monterey	Public hearing session- ACWA's 2002 Spring Conference
II	June 3 (Monday), 2002	Manhattan Beach Marriott, Los Angeles	2002 Annual Water Reuse Research Conference
III	July 12 (Friday), 2002	San Jose	Santa Clara WD
IV	September 12 (Thursday), 2002	Sacramento	CAL/EPA Building
	Oct. 10 (Thursday), 2002	Public Discussion Session, LA	POWER Conference
V	November 19 (Tuesday), 2002	Disneyland Hotel, Anaheim	ACWA's 2002 Fall Conference
VI	January 10 (Thursday), 2003	Sacramento	CAL/EPA Building
VII	February 26 (Wednesday), 2003	San Francisco	WaterReuse Association, California Section Annual Meeting

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<http://www.wue.water.ca.gov/recycle/>

2002 Recycled Water Task Force  
June 3, 2002

Photo of  
2002 Recycled Water Task Force  
Web Site

**10**

Photo of  
California Water Policy Conference  
October 9 & 10, 2002  
Web Site

**11**

Photo of  
Association of California Water Agencies  
2002 ACWA Fall Conference  
Web Page

**12**

## PRESENTATION BY ANE DEISTER

## Recycled Water Task Force Fourth Meeting

*Progress Report: Public Education  
and Outreach Work Group  
September 12, 2002  
Sacramento, CA*

1

## Today's presentation

- ▲ *Task Force charge*
- ▲ *PEO work group charge*
- ▲ *Opportunities*
- ▲ *Inputs to work group*
- ▲ *Work group guidelines*
- ▲ *Public participation observations*
- ▲ *Work group white paper*
- ▲ *Outreach to others*
- ▲ *Summary*

2

## Task Force

- ▲ *Charge*
  - ▲ *Evaluate current state and local rules, regulations, ordinances, permits*
  - ▲ *Identify obstacles, disincentives to maximize recycled water use*

3

## Public Education and Outreach

- ▲ *Charge*
  - ▲ *Outreach to the public about recycled water:*
    - ▲ *Address public perception, acceptance, education, social equity issues*
  - ▲ *Outreach to decision makers and others on behalf of the Task Force:*
    - ▲ *Identify and target entities to receive info from the Task Force*
    - ▲ *Seek ways to involve those targeted in our process*

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## Opportunity

- ▲ *Identify ways to:*
  - ▲ *Prevent opposition from forming*
  - ▲ *Learn what the public/dec. mkr. issues are*
  - ▲ *Communicate effectively*
  - ▲ *Listen effectively*
  - ▲ *Involve public early*
  - ▲ *Incorporate public issues within*
  - ▲ *Champion use of recycled water*

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## Inputs for Work Group

- ▲ *Comments from the Task Force meetings*
- ▲ *Work group meetings*
- ▲ *Email communications*
- ▲ *Literature search – summary underway*

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## Work Group Guidelines

- ▲ *Identify public participation practices that have worked successfully*
- ▲ *Consider other outreach efforts, incorporate where applicable*
  - ▲ *Statewide water conservation program*
  - ▲ *Anti-smoking*
- ▲ *Be sensitive to public views in general (manipulation by politicians)*

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## More Guidelines

- ▲ *Public participation process – not just public information*
  - ▲ *Project assessment*
  - ▲ *Project decision making*
- ▲ *Public education process to empower – not to simply sway*
  - ▲ *Info is technical – make understandable*

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## More Guidelines still . . .

- ▲ *Role of the public – involves respect*
  - ▲ *Public's "unfounded fears"*
  - ▲ *Identifying what is simply unknown*
  - ▲ *Acknowledge risk factors*
  - ▲ *Openly discuss factors of uncertainty*
  - ▲ *Clear, upfront communications*
  - ▲ *Understanding irrigation is one thing – drinking it is another thing altogether*

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## Public Participation Observations

- ▲ *Not unique to recycled water issues*
- ▲ *Some issues are universal*
  - ▲ *Growing concern related to public projects, governmental processes – trust, comfort*
- ▲ *Lots of info*
  - ▲ *Literature*
  - ▲ *Testimonies, presentations, workshops, etc.*

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## Work Group White Paper

- ▲ *Guiding Principles:*
  - ▲ *Public needs to participate during all aspects of a recycled water project – earlier the better*
    - ▲ *Interactive – two-way process – not just one way communication with an advisory panel*
    - ▲ *More than just CEQA, NEPA – not enough*

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## White paper cont'd

- ▲ *Choice is a key ingredient in project planning and design*
  - ▲ *Local communities and elected officials decide how and when to use recycled water in their communities*
  - ▲ *Requires empowering participants to ensure appropriate public involved; informed decision making by elected officials*

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### White paper evolving . . .

- ▲ *Certain public views and political forces transcend a particular project type:*
  - ▲ *Potable versus non-potable*
  - ▲ *Unchecked growth, managed growth and no-growth*
  - ▲ *Timing of use of recycled water sends a signal – growth issue? Reliability issue?*

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### White paper evolving . . .

- ▲ *Respect for community decision makers*
  - ▲ *Different learning curves*
  - ▲ *Different water supply options*
  - ▲ *Different public perceptions*
- ▲ *Respect roles*
  - ▲ *Facilitators*
  - ▲ *Public*
  - ▲ *Decision makers*

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### White paper . . .

- ▲ *Role of education*
  - ▲ *Empower participants to be effective*
  - ▲ *Level playing field*
    - ▲ *On proposed recycled water project – language, technical factors, etc.*
    - ▲ *Comparison with other resource options – for planning, cost, safety, reliability, environment*
  - ▲ *Lead to informed decisions*

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### White paper . . .

- ▲ *State's education role*
  - ▲ *Publicly encourage through accurate information*
  - ▲ *Sponsor media campaigns (Flex your power)*
  - ▲ *School system K – university programs*
  - ▲ *Dispel myths – water is pure, recycled water is fall from grace*

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### White paper . . .

- ▲ *Education cont'd:*
  - ▲ *Message management challenges*
    - ▲ *Mixed message – don't drink the recycled water! Oops – now it is OK to drink it.*
    - ▲ *Indirect reuse – held until safe; direct use – OK to use immediately – what is "safe"*
  - ▲ *Clear communications*
    - ▲ *Different levels of treatment to match different uses*

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### White paper . . .

- ▲ *Role of public education and outreach in overall task force charge:*
  - ▲ *Science & Health / Direct Potable Reuse – identified need for public advisory panel*
    - ▲ *To advise on how to approach public, kind of info, help explain what is "safe"*
    - ▲ *Task Force needs to evaluate – is this a statewide, ongoing panel?*

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## White paper . . .

- ▲ *Biting the bullet*
  - ▲ *General belief that direct potable use not acceptable until there is no other option*
    - ▲ *Task force input welcomed*
  - ▲ *However, the tool kit for all uses may have a core of similar activities, approaches*
  - ▲ *May want to include some specialty ideas for unique situations*

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## Outreach to others about the Task Force

- ▲ *Each member within own home turf*
  - ▲ *As part of regular speakers bureau, etc.*
- ▲ *Water Environment Research Foundation (WERF) and WEFTEC, Chicago, Sept. 29*
  - ▲ *Successful Public Involvement workshop*
- ▲ *POWER Conference, October 10, 2002, 7:00-8:20 am – public dialog*

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## Summary

- ▲ *Task Force reduce/remove impediments*
- ▲ *Public/decision maker issues – may be impediment*
  - ▲ *Perception, facts, beliefs, values*
  - ▲ *Complicated sometimes*
- ▲ *Lots of information on horizon – learn from the successes*

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## Summary cont'd

- ▲ *Guiding principles*
  - ▲ *Trust, respect, value of other views*
  - ▲ *Empower not brainwash*
  - ▲ *Appreciate community needs, situation*
  - ▲ *Involve public & other decision makers early and often*
  - ▲ *Realize other agendas may be in play*
  - ▲ *Choice is key!*

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## Your questions? Comments? Input?

*Are we meeting your expectations?  
How are we doing?*

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## PRESENTATION BY TOM GOHRING

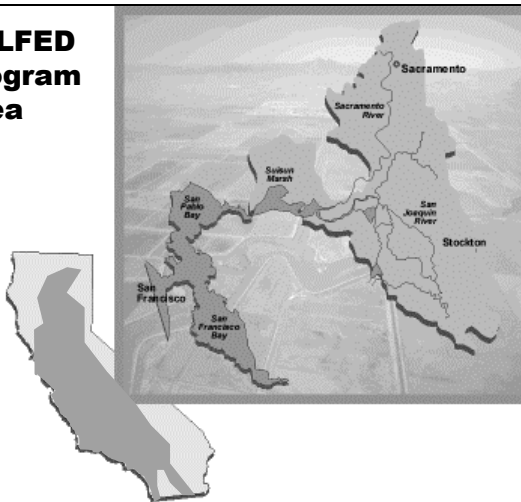
**CALFED  
BAY-DELTA  
PROGRAM**
**2002 Recycling  
Task Force  
Funding / CALFED Subcommittee**

1


**Overview**

- Introduction to CALFED Bay-Delta Program
- Approach to "Recycling Benefits" White Paper
- Questions

2


**CALFED  
Program  
Area**

**Importance of the Bay-Delta  
System**

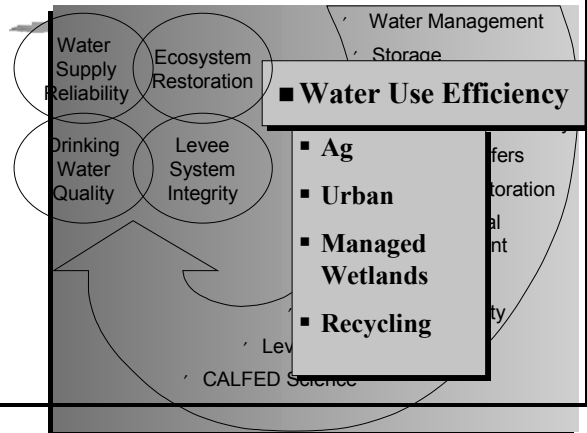
- Drinking Water for 22 Million Californians
- 750 Plant & Animal Species
- 80% of the State's Commercial Salmon Fisheries
- \$27 Billion Agricultural Industry
- California's Trillion Dollar Economy

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**Defining the Bay-Delta  
Conflict**

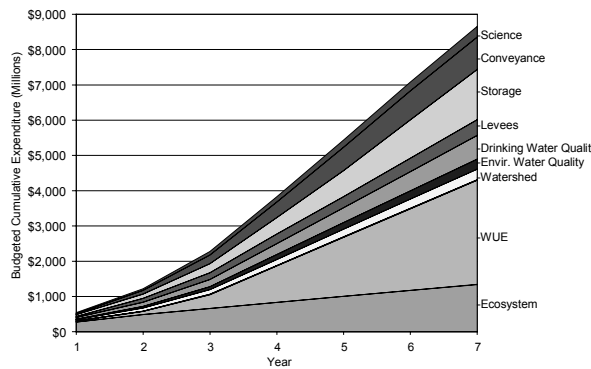
ECOSYSTEM RESTORATION	California's Bay-Delta is an ecosystem in decline from decades of competing demands.
WATER SUPPLY RELIABILITY	Water supplies are increasingly unreliable.
WATER QUALITY	Water quality continues to degrade, making it difficult and expensive to meet drinking water standards.
LEVEE SYSTEM INTEGRITY	Delta levee failures threaten agricultural, urban and environmental uses.

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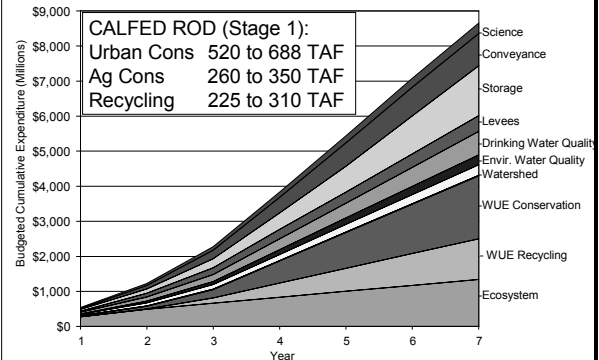

**CALFED Goals & Programs**
Resource Management Goals
Programs




### Importance of Water Recycling to CALFED



### Importance of Water Recycling to CALFED



### Outline of White Paper

## The Benefits of Water Recycling

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### Water Recycling Benefits

1. Introduction
2. Background – Need for Assessment
3. Methods
4. Recycling Costs
5. Recycling Benefits
6. Recycling Benefits per Dollar
7. Summary and Conclusions
8. Need for Additional Work

10



### Water Recycling Benefits

#### Recycling Cost Table

- Name
- Description
- Owner
- Type
- Status
- Region
- Funding
  - Local, State, & Federal

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### Water Recycling Benefits

#### Recycling Benefits Table

- Name, Description, Owner, Type, Status, Region
- Benefits
  - Quantified (AF):
    - Planed
    - Verified
  - Other: Qualitative Description

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## Water Recycling Benefits

### Recycling Benefits per Dollar

- Name, Description, Owner, Type, Status, Region
- Benefits per Dollar
  - Project Life
  - Int. Rate
  - Annualized Cost (\$/AF)
  - Benefit Verified
  - Unit Benefit (\$/AF/yr)

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## Water Recycling Benefits

### Issues

- Getting data on locally funded projects
- Verifying data on local match to State & Federal Grants
- Adequately characterizing "other" benefits
- Staff availability

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## Questions ?

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## PRESENTATION BY MARIA MARISCAL

### **Local Role in Funding Water Recycling Efforts**

**How can the Taskforce help local agencies fund projects?**

**Maria Mariscal**

**San Diego County Water Authority**

1

### **Need to Gather Information on Current Local Funding Process**

- Develop an model matrix to display information
- Include data in the matrix on as many projects as possible
- Analyze the data to develop observations on current trends

2

### **Local Marketing**

- To assure sufficient funding support, potential projects need to be marketed to:
  - Local policy makers
  - Constituents
  - Potential users

3

### **Need to asses current local marketing efforts**

- Surveys should be performed by:
  - CA Division of WateReuse Association membership
  - SWRCB (program participants)
  - DWR (recycling contacts)
- Information gathered should be analyzed and shared

4

### **Local prioritization of funding and projects**

- **Water Agencies Review:**
  - **Urban Water Management Plans**
  - **Integrated Resource Plans**
  - **Other local/regional water management plans**

5

### **In the Plans Review and Analyze:**

- Projected population growth
- The need to serve newly developed areas
- Anticipated uses of water demand
- Evaluation of cost of various water resource options
- Recommendations for meeting demands

6

### **Sewage Agencies**

- View water recycling projects as way to reduce sewage discharge flows
- Projects can help meet state and federal discharge requirements

7

### **Conclusion**

- Information on current local funding status to be gathered
- Analysis of local marketing process to be completed
- Consideration of water recycling projects in local water and wastewater planning to be advocated

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## PRESENTATION BY DIANA ROBLES

## State/Federal Funding of Water Recycling Efforts

Funding /Calfed Coordination  
Subgroup

2002 Water Recycling Task Force  
September 12, 2002

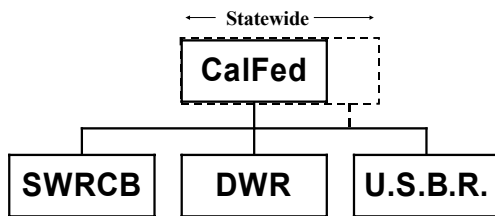
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## Updating the Task Force September 12, 2002

- Brief overview of major funding programs
- Recommendations of the Funding/Calfed Coordination Subgroup

2

## Funding Agencies



3

## Varying Process Type

- DWR: Request For Proposals (Batch)
- SWRCB: Continuous Application (First Serve)
- USBR: Act of Congress

4

## Advantages to DWR's RFP Process

Selection of projects to be funded based on  
greatest benefit obtained  
at the lowest cost to the State

5

## Advantage of SWRCB's Continuous Application Process

- a RWQCB and/or DHS mandated deadline
- the timing established users are in need of recycled water;
- the urgency for augmenting the water supply with recycled water (i.e. development, drought years, etc); and/or
- construction of facilities with other concurrent capital improvement projects.

6

**Recommendation No. 1:  
Establish Coordination Among  
Programs**

- DWR to refer projects to SWRCB's program
- Staff to assist agencies seeking resources

7

**Recommendation No. 2:  
Streamline Process  
Yet Increase Accountability**

- Streamline Application Process to Acquire Funding
- Increase Strongholds requiring delivery of Recycled Water

8

**Planning and Research**

Established funding for local Project Planning  
and Research

**Recommendation No. 3:  
Expand Funding for Regional Planning Efforts**

9

**Recommendation No. 4  
Provide Outreach and Education**

Establish Website  
Calfed and Other Funding

- Provide description and criteria of funding programs
- Provide Application Instruction
- Provide a log of projects funded
- Provide the benefits accrued by funded projects

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**Recommendation No. 4 (Cont.)  
Provide Outreach and Education**

Provide Annual Funding Information  
Workshop

- Provide crucial information
- Assist participants in filling out an application

11

**Conclusion**

- Completing Draft White Paper Shortly
- Include Recommendations
- Propose incorporation into Final Report

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## PRESENTATION BY RICHARD MILLS AND JEFF STONE

## Regulatory Framework of Water Reclamation in California

2002 Recycled Water Task Force  
12th September 2002

**Richard A. Mills**  
Office of Water Recycling  
California State Water Resources Control Board

**Jeff Stone**  
Recycled Water Program Coordinator  
California Department of Health Services

1

## Presentation Overview

- Overview of State Agencies
- State Water Resources Control Board
- Department of Health Services
- Local Health Jurisdictions and Authorities
- Regional Water Quality Control Board

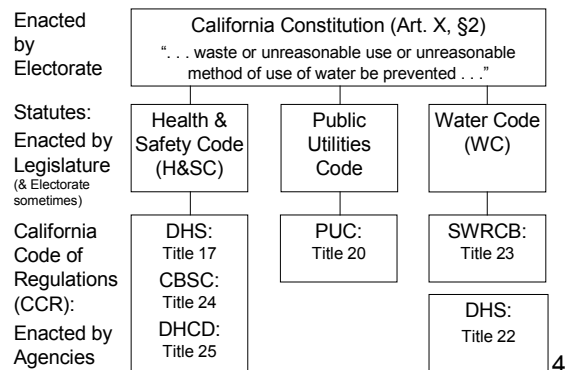
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## Regulatory Objectives

- Protect public health, environment, water rights, public welfare, jurisdictional boundaries
- Efficiency: clear authorities and requirements
- Fairness: consistent decisions
- Regulatory certainty: known and uniform standards
- Public confidence: standards enforced

3

## Hierarchy of Laws



4

## State of California Responsibilities of State Government

- Water Supply
  - Department of Water Resources
- Water Quality
  - State Water Resources Control Board
- Public Health
  - Department of Health Services

5

## Additional State Agencies

- California Building Standards Commission
  - Uniform statewide plumbing standards (H&SC, §18938(b); CCR Title 24, Appendices G and J)
- Department of Housing and Community Development
  - State Housing Law standards (H&SC, § 17950; CCR Title 25, §§601.2.2, 601.2.3)
- California Public Utilities Commission
  - Rates and revenues of investor-owned utilities
  - Duplication of service (Public Utilities Code, §§1501-1507)

6

## Department of Water Resources

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- Long-term water supply planning for state
- Operates State Water Project
- Standards for
  - Greywater use (WC §§14875-14877.3; CCR T24, Appendix G)
  - Indoor plumbing for recycled water (Appendix J, apparently drafted but not adopted by DWR) (CCR Title 24, Appendix J)

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## State Water Resources Control Board

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- Protects water quality (Porter-Cologne Water Quality Control Act: WC Division 7, §§13000 et seq.)
  - Water quality control plans (basin plans) (WC §§13164, 13170, 13240 et seq.)
  - Regulatory programs: 9 Regional Water Quality Control Boards
  - Financial assistance to local agencies (WC: Bond laws of 1974, 1978, 1984, 1988, 1996, 2000)

8

## State Water Resources Control Board

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- Allocates rights to use of surface waters (Constitution, Art. X)
  - Waste & unreasonable use hearings for use of potable water in place of reclaimed water under certain conditions (WC §§13550, 13551)

9

## State Water Resources Control Board

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- Basin Plans
  - Beneficial Uses for all surface and ground-water bodies
    - ♦ MUN: Municipal use (drinking water source)
  - Water quality objectives to maintain or achieve beneficial uses
    - ♦ SWRCB Policy protecting sources of drinking water (Resolution No. 88-63)
    - ♦ SWRCB "Non-degradation Policy" (Res. 68-16)
    - ♦ DHS Title 22 recycled water criteria for groundwater recharge to protect drinking water sources

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## Department of Health Services -Organizational Structure-

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- Division of Drinking Water and Environmental Management
  - Drinking Water Program
    - ♦ Field Operations Branch
      - 22 District Offices
      - Permit Public Water Systems (Safe Drinking Water Act: H&SC §116325)
      - Review Recycled Water Proposals
    - ♦ Technical Programs Branch
      - Recycled Water Unit

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## Role of Department of Health Services - Recycled Water

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- Develop Water Recycling Criteria (WC 13521)
  - CCR Title 22, Chapter 3, Articles 1 - 10
  - Non-Potable and Indirect Potable Uses
- Review proposals for T-22 compliance (WC 13523)
  - Engineering Report: Treatment, Use-site design/controls, "O&M" Procedures, Rules of Service, Ordinances
- Timelines/Delegation/Reimbursement (WC 13554.2)
  - Ensures timely review / comment of proposals

12



### Role of Department of Health Services - Recycled Water

- Interface with other State and Local agencies
  - Food & Drug / Licensing and Certification / USDA / Local Building & Fire and *Local Health Departments*
  - Cross-Connection Control
    - ♦ **CDHS Oversees PWS Programs**
      - (Meter Protection-H&SC 11655, T-17 §7584)
    - ♦ **LHDs**
      - (Users Premises-H&SC 116800)

13

### Role of Department of Health Services - Recycled Water...

- Guidance development / interpretation
- Review new / emerging technologies
- TPB provides technical support to FOB
- Interface with recycled water industry and organizations

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### Department of Health Services Information Sources

- California Safe Drinking Water Act & Related Laws - “Blue Book” (7th Edition)
  - Found Under Publications
- California Health Laws Related to Recycled Water - “Purple Book” (June 2001)
  - Found Under Water Recycling
- [WWW.DHS.CA.GOV/PS/DDWEM/INDEX.HTM](http://WWW.DHS.CA.GOV/PS/DDWEM/INDEX.HTM)

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### Memorandum of Agreement CDHS / SWRCB

- Clearly outlines roles & responsibilities of CDHS / SWRCB / RWQCB's
- Based on elements of the WC
- Dispute & conflict resolution

16

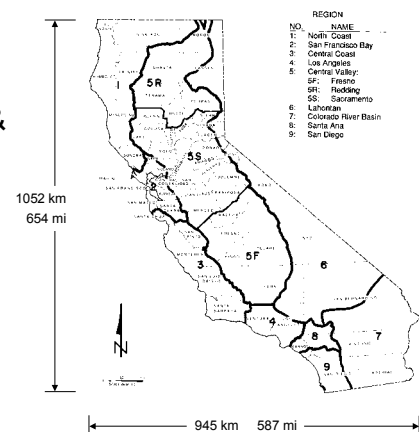
### Regional Water Quality Control Boards



- Develop Basin Plan (WC §13240)
- Adopt and Enforce Permits for Wastewater Discharge and Reclaimed Water Use (WC §§13260, 13523, 13523.1)

17

### California Regions & Counties



### Types of Permits

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- Waste Discharge Requirements Permits (WC §13263)
  - For surface waters, same as federal National Pollutant Discharge Elimination System (NPDES) permits
  - May include water reclamation requirements
- Water Reclamation Requirements Permits (WC §13523)
- Master Reclamation Permits (WC §13523.1)
  - May include waste discharge requirements (WC §§13263(h), 13523.1(b)(1))

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### Who Receives Permits

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- Three Options:
  - Wastewater treatment plants owners
  - Reclaimed water purveyors
  - Reclaimed water users
  - (WC §§13523(b), 13523.1)

20

### Permit Development for Reuse

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- RWQCB drafts permit
  - Report from entity requesting permit
  - Consultation & recommendations from DHS
  - Incorporates applicable provisions of CCR Title 22
  - Other provisions to protect environment, prevent nuisance, monitor operation and compliance

21

### Protecting Reclaimed Water Quality

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- Source Control, Industrial Pretreatment, or Pollution Prevention Programs
  - Governs discharge of wastes into sewers that cannot be treated effectively by municipal treatment plant or could harm treatment plant
  - Regulated sources: industry, commercial
  - Potentially regulated: water softeners
  - Unregulated: pharmaceuticals
  - Ref: WC §13263.3, Clean Water Act §307

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### SWRCB Information

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- [www.swrcb.ca.gov](http://www.swrcb.ca.gov)
  - Try Alphabetical Index
- Office of Water Recycling Web site
  - <http://www.swrcb.ca.gov/recycling/index.html>
  - Funding programs and statewide survey

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## PRESENTATION BY NORRIS BRANDT

# Water Softeners

## *2002 Recycled Water Task Force*

### *Regulation & Permitting Workgroup*

Norris Brandt, PE  
Irvine Ranch Water District

1

### Converging Challenges

- Hard potable water
  - Calcium/magnesium salts
  - Coastal areas
  - Saline imported water (Colorado River)
  - Saline/hard groundwater
- High salinity wastewater recycled for reuse
- *Also* chlorides

2

### The Problem

Ionic exchange water softeners add enough salt to already saline recycled water that it becomes unmarketable and/or causes non-compliance with regional board permits

3

### Other Background

- Hard water/saline wastewater areas also happen to be some of the highest population areas where water resources are limited and recycled water is valued
- 5 to 20% residential market penetration; primarily middle/upper income areas
- Industrial/commercial softeners can be regulated by local agencies

4

SB 1006 (Costa) -- Drinking water: water softening devices



*Supporting Agencies*

5

### Typical Self-Regenerative Softener

Valves/Controller

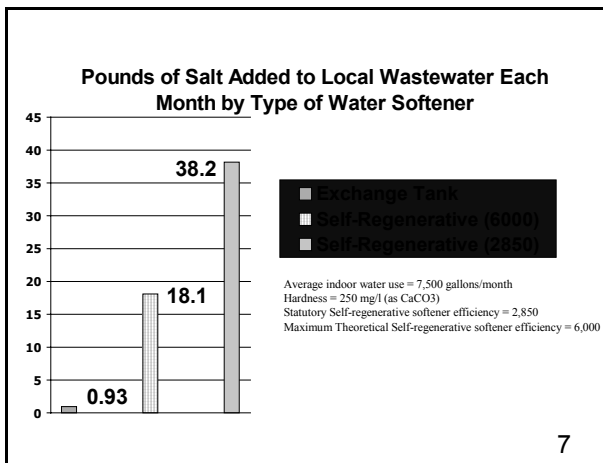
Resin Tank



Brine/Regeneration Tank

Source: Culligan Mark 10 Softener clipped from  
www.culligan.com

6



### The IRWD Story

- Recycled water since 1967
- Softener regulation since 1966
- 90% of water used for landscaping
- 20% of all water used in IRWD
- Out of permit compliance

8

### 1997 Court Case

- 4th District Court of Appeals
- Water Quality Association vs City of Escondido
- Local regulations preempted by State statutes
- Court Recommendation:  
Amend existing State statutes

9

### SB 1006 (Costa)

- 1999
- Sponsored by ACWA and IRWD
- Extensive negotiation
- Supported by dozens of public agencies, CLCA, others
- Opposed by dozens of softener manufacturers, their employees, and customers; removed after negotiation

10

### SB 1006 (Costa)

- Demand control required 1/1/2000
- Currently Efficiency = 2,850
- 1/1/2000 Efficiency = 3,350
- 1/1/2002 Efficiency = 4,000
- Existing softeners are "grandfathered in"

11

### SB 1006 (cont'd)

- Agencies may regulate:
  - Effective 1/1/2003
  - If they are violating a waste discharge or recycling permit
  - If they are already regulating non-residential sources to the extent economically and technically feasible
  - If an "independent study" finds it to be the only available means

12

### Other Existing Code

- Certification required by C-55 water conditioning or C-36 plumbing contractor
- Water conservation devices installed
- Separate piping for outdoor water
- Permit required?

13

### Public Agency Concerns

- SB 1006 set the bar too high for actual implementation
- Pollution by ion exchange softeners should be prevented, not removed
- Paralysis by analysis

14

### Softener Industry Concerns

- Softener bans put "small businesses" out of business
- Public agencies arbitrarily single out residential softeners, without sufficient facts

15

### Potential Solutions

- Costs vary widely
- Who should pay the cost/inconvenience of keeping salinity out of recycled water?
- Likely requires review of multiple solutions
  - Regional softening/salinity removal
  - Salt source control (e.g., softeners)
  - Incentives
  - Salt removal (e.g., reverse osmosis)

16

### Recommendation

- Clearly, ionic exchange softeners add salt to the wastewater stream, thus impairing its reuse potential
- Include their use in the Task Force report as an impediment to recycled water use expansion
- Combine with the more general topic of source protection

17

## PRESENTATION BY WENDY ILLINGWORTH

## Economic and Financial Evaluations Of Recycled Water Projects

presented to  
2002 Recycled Water Task Force  
by

Wendy Illingworth  
Economic Insights

1

### Economic vs. Financial Analysis

***Economic:*** Is a project worth doing?/which option is most beneficial?/who bears costs and enjoys benefits

***Financial:*** Who will pay and how?

2

### How do we evaluate projects?

- Step 1. Identify Costs and Benefits
- Step 2. Measure and Value Costs and Benefits
- Step 3. Discount Costs and Benefits
- Step 4. Analyze Uncertainty (risk)

3

### IDENTIFYING COSTS & BENEFITS

Most pain and most fun

Begin with brainstorming session  
– worry about *might*, not *will*.

Worry about measurement later

4

***If it don't make the list,***

***It doesn't exist.***

5

### VALUING DIRECT COSTS

Costs of Building and Operating Facility

Project life/salvage value

Financing

Real or Current Dollars

6

### Are Current Dollars Real?

**Current (nominal) dollars** – what is on the check – value changes every year.

**Constant (real) dollars** – what it is worth – inflation taken out. Value fixed over time.

**Present Value** – a single number, not a stream of costs.

7

### VALUING DIRECT BENEFITS

**These are usually avoided costs**

– cheapest alternative option

**Will include avoided operating costs** – inc. treatment/distri.

**May include avoided capital costs**

8

### BRING IN OUTSIDERS

**They know their costs** – may be hard to obtain

**Need regional “buy-in”**

**Physical boundaries matter more than political**

9

### INDIRECT COSTS

**Usually “softer costs” but should not be overlooked**



- Loss of habitat
- Loss of tax revenue, other income.
- Public inconvenience

10

### INDIRECT BENEFITS

**Also usually “softer”**

- Benefits to Delta?
- Reduced wastewater costs?
- Improved water quality?

**List and measure environmental and social costs**

11

### WHAT'S A FISH WORTH?

$$\text{\$} + \text{fish} = ?$$

12

### INTEGRATING MONETARY AND NON-MONETARY VALUES

- Find something similar to value.
- Find out what others are paying.
- Estimate break-even point.

13

### ALLOCATE BENEFITS AND COSTS

- Examine multiple perspectives
- What is Willingness to Pay?
  - Consumers
  - Water agencies
  - Wastewater agencies
  - Other agencies/wider region

14

### WHAT IS FINANCIAL BURDEN?

- Construction bonds and operating income
- What are limitations?
- Who will be responsible?
- What is rate impact?
- What are risks?

15

### RISK ASSESSMENT

- What could go wrong?
  - Might standards change?
    - water quality, environmental
  - Might options disappear?
    - transfers, groundwater banking, recycling, agriculture.
- What is potential for outside funding?

16

### OVERALL

- Look for “low-hanging fruit”
- Look for maximum buy-in on planning process
- Understand different perspectives
- Include indirect benefits and costs
- Look ahead at future regulations



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